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Weed Seed in Poultry Litter: Should Farmers Be Concerned?

Monroe Rasnake

Over the years, I have received many calls from farmers who have had unusual weed problems in their fields. Their first thoughts normally are that weed seeds were brought to the fields in crop seed, hay, manure, etc. Some of the same concern has been expressed in regard to using poultry litter on fields. As poultry litter becomes available to more Kentucky farmers, should they be concerned about the possibility it would contain weed seed? The simple answer to the question is "NO" in most situations.

The two most likely sources of weed seed contamination of poultry litter are through the feed or the litter material. In the case of feed, weed seeds present in the ingredients probably would not survive feed processing. If live seeds were in the finished feed, it is unlikely they would remain viable after going through the chicken's

digestive tract. However, it seems possible that fresh peanut hull or rice hull litter could contain weed seed, while wood shavings and sawdust would be less likely to be contaminated. But, even if weed seeds are in the litter, will they survive and germinate when the litter is spread on the land?

Research at Auburn University in Alabama, where litter samples were collected from 18 broiler houses, showed there were no viable weed seeds present. The samples consisting of peanut hulls or pine wood shavings were mixed with sterile potting soils at rates equal to 16 and 32 tons litter per acre. Weed seeds were planted in half the pots. Nothing sprouted and grew except in the pots where weed seeds had been planted, indicating either that there were no weed seeds in the litter or that if present, they were not viable.

In some tests conducted at

Princeton, Kentucky, in 1994, litter from broiler houses in Kentucky using rice hulls for bedding were checked for weed seed. Litter was applied to pots of sterile soils in the greenhouse and weed seeds were sown in half the pots. Weeds germinated and grew only in the pots where seeds were sown. Not even one weed grew in the pots where only broiler litter was added to the soil.

Studies such as these show that it is very unlikely that viable weed seed will be carried to a field in poultry litter. If more weeds are observed in the fields where poultry litter has been used, it probably will be the result of the litter stimulating the seeds or the weeds that are already present.

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